

Before the Federal Communications Commission Washington, D.C. 20554

FCC 13-39

In the Matter of

ET Docket No. 13-84 Reassessment of Federal Communications Commission Radiofrequency
Exposure Limits and Policies

ET Docket No. 03-137 Proposed Changes in the Commission's Rules Regarding Human Exposure to
Radiofrequency Electromagnetic Fields

To: Office of the Secretary Federal Communications Commission (FCC), Washington, DC 20554

Reply Comments Filed by: Angela Flynn, PO Box 1439, Kilauea, HI 96754 November 18, 2013

Addendum

<http://www.bantheatower.co.nz/electrohypersensitivity/>

Electrohypersensitivity

A new environmental impairment

by Anne Gastinger

It has become increasingly apparent that our vaunted electronic technology can cause and is causing lasting damage to human health.

One of the impairments is Electrohypersensitivity (EHS). Those who suffer this condition become ill when exposed to Extremely Low Frequency (ELF) and Radio Frequency (RF) electromagnetic fields. Currently there is no known cure, only management which entails avoidance of the sources of these frequencies.

Biological Effects from Non-Ionising Electromagnetic Frequencies

The emergence of this condition is hardly surprising given the strong body of evidence dating back 80 years that documents serious biological effects from these electromagnetic frequencies. Dr. Andrew Goldsworthy, who is now a retired lecturer in Cell Biology at Imperial College, London and former scientific advisor to the European Space Agency, explains how "Virtually every living cell is a seething mass of electric current and electrical and biochemical amplifiers that are essential for their normal function. We should not be surprised to find that our cells can detect and respond to electromagnetic fields that are orders of magnitude below the strength needed to generate significant heat." [1] We are electro-sensitive beings that have evolved in synchronicity with the earth's natural magnetic field of 7.83 Hz.

Of serious concern is the mounting evidence that more and more people are developing electrohypersensitivity with researchers estimating that between 3 to 5% of the population in France and Sweden currently suffer from it. French Oncologist, Professor Dominique Belpomme expects these

numbers to rise in the next 25 to 50 years by up to 50% of the population. This will occur as previously healthy people become sensitised from exposure to the escalating use by industry and consumers to technologies that utilise pulsed microwave radiation such as smart meters, cell phones, Wi-Fi activated lap tops, ipads, DECT portable phones etc.

It is theorised that the pulsed microwave emissions emitted by these technologies are beyond what is biologically tolerable. Dr. Andrew Goldsworthy states that “Those fields that give the most trouble are the Extremely Low Frequency and radio frequencies that are pulsed. The higher frequencies such as microwaves used in cell phones, Wi-Fi and DECT phones are the most damaging. Our present exposure to man-made microwaves is about a million billion billion (one followed by eighteen zeros) times greater than our natural exposure to these frequencies”. [2] No longer are we outside the microwave oven; we have now crossed the threshold and embedded microwave emissions in our personal environments. World renowned scientists state that in regard to radio frequency radiation technology, the world is witnessing the largest biological experiment in the history of humankind, all without the knowledge or consent of the population. An example of this is the proliferation within twenty odd years of an estimated five million cell towers across the planet. This government sanctioned development was undertaken even though as early as 1975 Dr. Allan Frey, a Neuroscientist from Princeton University, USA, had established that microwaves with the modulations used in today’s cell phone technologies can cause leakage in the blood brain barrier. However those responsible for safe guarding public health have chosen not to take this precautionary measure.

Bioengineer, Professor Henry Lai from the University of Washington, has documented the effects on organs and systems in the body of these frequencies; “The DNA in the living cells recognises electromagnetic fields at very low levels of exposure and produces a biochemical stress response.” He adds; “Our cells in our bodies are reacting to electromagnetic fields as potentially harmful, like other environmental toxins. The DNA in the living cells recognises electromagnetic fields at very low levels of exposure and produces a biochemical stress response”. [3]

Professor Belpomme’s research has shown that “EMFs trigger major effects in the brain. The most important effect is the opening of the blood-brain barrier. This allows mercury, organochlorates and other toxins to pervade through the brain, where they cause diverse ailments and neurodegenerative diseases.” [4]

Where We Encounter Non-Ionising Electromagnetic Frequencies

We are in constant contact with the ELF fields emitted from household wiring, electrical appliances such as TV’s and computers, low and high voltage power lines, wireless pulsed microwaves signals that enable us to use our cell phones and ipads in cafes, libraries, restaurants, hotels and schools. Radio frequency operated technologies are embedded in nearly every aspect of our lives today. From the smart phone or DECT portable phone to the Wi-Fi router and smart electricity meter located in the hallway. These electromagnetic frequencies occupy our homes, pulsate along our streets, vibrate within our buses and trains, at airports and subways and permeate our human cells just as easily as they pass through glass windows and concrete walls. Unfortunately there is no easy shielding solution like a sun block cream. For EHS sufferers, their symptoms (cardiovascular, dermatological, neurological and muscular) are so strong they have to protect themselves with special clothing, or their homes with paints and metal shielding which ideally will be connected to the ground.

Electrohypersensitive sufferers’ predicament is a nightmare of Orwellian proportions. Impaired by their environmentally triggered condition, they lack the social or medical recognition and advocacy

they desperately need. Sick, isolated and generally discredited, they struggle to find sanctuary from the artificial electromagnetic fields that pervade our modern environment. Once sensitised to pulsed microwaves, any reasonable lifestyle in our new technology loving world is denied to EHS sufferers looking for safe work environments or safe housing (free from neighbors' Wi-Fi emissions). Visits to technology filled medical facilities or hospitals simply aggravate the condition further.

Many EHS sufferers must also contend with multiple chemical sensitivities with both syndromes sharing common brain anomalies. Professor Belpomme notes that “biological tests demonstrate that 30% have elevated histamine rates, 50% have elevated rate of stress proteins, most of them have a very low rate of melatonin (anticancer hormone), and 30% have antibodies and protein rates which indicates a thermal shock and speak for brain suffering.”[5]

That this condition remains obscure may also be due to the commercial damage its recognition will cause. Even when public figures such as Gro Harlem Brundtland, (former President of Norway and the World Health Organization (WHO) Director General until 2005), disclosed in 2002 that microwaves emitted by cell phones made her sick, the mainstream media did not investigate why. Perhaps if they had researched the condition it would have harmed their lucrative telecom advertising markets?

Institutional Responsibilities

Governments and regulators seem loath to strengthen the safety guidelines that were set by the regulatory body – the International Commission on Non-Ionizing Radiation Protection (ICNIRP), some years ago. Telecommunication legislation such as New Zealand's National Environmental Standards for Telecommunications Facilities Act 2008, (NZS 2772:1), has enabled the enforced placement of Cell Phone Towers and Wi-Fi hotspots near schools, hospitals and private homes with the public having no right to object. Since this period, significant increases of EHS have been noted by monitoring bodies. However, insurers such as Lloyds of London and Swiss Re are alert to this health threat, inserting clauses in their policies that state they will not underwrite health conditions caused by non-ionising radiation.

Perhaps the tide of change will turn as a result of judicial decisions such as the Californian case in 2005 which ruled that cell phone programmer Sharena Price's brain tumour was caused by non-thermal EMF exposure. Recently, in October 2012 the Italian Supreme Court found in favour of businessman Innocente Marcolini whose medical team testified that his long term use of cell phones was the cause of his brain tumour. These court findings completely reject the safety standards set by the ICPNIP which supposedly should have safeguarded both complainants from developing brain tumors as a result of exposure from non-ionizing radiation.

Since the Salzburg Resolution of 2002, there have been at least 20 International resolutions[6] from reputable scientists, physicians, and public health officials calling for the introduction of tougher standards similar to those set out in the BioInitiative report of 2007. These resolutions assert that the current International Committee on Non- Ionizing Protection Regulations standards are based on 1950's assumptions that risks to health appear only where frequencies cause a thermal (heating) response. The European Parliament in September 2008 announced that “The limits on exposure to electromagnetic fields which have been set for the general public are obsolete”.[7]

Where does the truth lie and what is a ‘safe dose’? Professor Madga Havas suggests that “ELF magnetic fields should be below 1mG and ELF electric fields below 5V/m. For constant exposure to radio frequency radiation the best guidelines so far are the Salzburg guidelines at 0.1 microwatts/cm².

EHS people react at levels much lower”[8]. Research from scientists such as Lai, Goldsworthy, Havas, and Belpomme, are unraveling the mechanisms at play in the dangerous interaction between living cells and non-ionising radiation at orders of magnitude well below existing guidelines.

Recognition and Treatment for those Environmentally Impaired

Canada provides treatment for the environmentally impaired at the Environmental Health Clinic, established in 1996 at the New Women’s College Hospital in Toronto[9] as does the Environmental Health Centre in Nova Scotia. In the USA Dr. William Rea’s world renowned Environmental Health Center in Dallas, Texas, treats the environmentally impaired. In Switzerland Dr. Thomas Rau’s medical team offers treatment for such patients at the Paracelsus Clinic in Lustmuhel. In Germany, hospital rooms for patients with electrical and chemical allergies are provided at the Agaplesion Diakonie Klinikum in Hamburg.[10] In Sweden, hospitals in Umea, Skelleftea and Karlskoga provide special rooms with very low EMFs so that persons who are hypersensitive can get medical care.

Information and treatment guidelines are now available for this condition. In 2012 the Austrian Medical Council released its guidelines for diagnostic criteria for EHS.[11]

A Doctor’s Information Package for medical conditions connected with EHS can be found at www.citizensforsafetechnology.org. Otherwise Health practitioners wishing to learn about EHS can attend the Institute for Neurobiology’s EMF conference held annually in Seattle, contact www.klinghardtneurobiology.com.

Given that 3-5% of the population in France and Sweden suffer from EHS, approximately 130,000 people in New Zealand may be affected to some degree by electrohypersensitivity. New Zealand does not officially recognise EHS as a medical condition. It is not included in the curriculum at medical schools. Consequently most health professionals are ill equipped to diagnose EHS due to lack of training and awareness. Compounding the difficulty of diagnosis is that most symptoms of EHS cover a broad range. Misdiagnosis denies the patient the opportunity to receive the advice needed to manage and prevent their condition from deteriorating further. It is imperative that health practitioners listen and believe their patients when they confide that their symptoms are aggravated by products such as cell phones, smart meters and Wi-Fi.

One sufferer described how at night if she is within range of neighbours’ Wi-Fi, she initially feels very alert, then experiences pulsed waves of current deep within her limbs, eventually her limbs start to jerk, she cannot sleep and suffers from a migraine the following day. Her story is one of many where due to the severity of their symptoms, EHS sufferers are forced to leave their homes, sleep in cars, in forests, anywhere to escape the painful consequences of exposure.

Research Studies

Environmental toxicologist, Professor Magda Havas from Trent University, Toronto, claims that negative results to electrosensitivity provocation testing are compromised by major flaws. “Researchers would presume that reactions are instant albeit very often there is a backlash delay. People are not instantly reactive electrical switches. Those studies erroneously infer that if nothing can be felt, then it shouldn’t be harmful. We do very well know that you cannot detect the taste of arsenic, lead, DDT, asbestos; yet all of those are toxins.” In 2011 a study by McCarty et al titled ‘Electromagnetic Hypersensitivity: Evidence for a Novel Neurological Syndrome’ was published in the peer reviewed International Journal of Neuroscience, substantiating this syndrome. Generally such testing methods

have been unsuccessful due to EHS symptoms being highly variable, symptom onset may be delayed by hours after an exposure and as found by Lai and Singh in 1997 the effects of these frequencies exposure on the human body (EHS sufferers and the general public alike) are cumulative over time. Added to study design challenges are the complications that the infinite range of variables such as intensity, frequency, modulation and pulsing that exist in the electro magnetic spectrum give. Comparative study designs too are confounded by the fact there is probably no living organism on earth that has not been exposed to terrestrial or satellite artificial non- thermal radiation.

What is Needed?

The creation of public spaces and facilities free from Wi-Fi.

A voluntary opt out clause from smart meter radio mesh networks (similar to that which exists in Holland).

Working and housing environments appropriate for electrohypersensitive people.

Research must be commissioned that is not linked to commercial interests.

Policymakers and the developers of new technologies need to respond and redress the weak regulatory standards that are threatening public health.

Aristotle demanded “Rescue the phenomena” from theories that ignore the facts. The phenomena are these very sick people suffering from electrohypersensitivity. While most lawmakers want to believe that current safety regulations for non-ionizing radiation are at levels that protect the general population, the facts show they do not. Stricter regulations will come, increasing awareness of health effects will come. The question is how long will these people have to suffer and how much damage will be done before these changes come?

Symptoms of EHS:

Symptoms vary between individuals but may include:

Neurological: headaches, dizziness, nausea, difficulty concentrating, memory loss, irritability, depression, anxiety, insomnia, fatigue, weakness, tremors, muscle spasms, numbness, tingling, altered reflexes, muscle and joint pain, leg/foot pain, “Flu-like” symptoms, fever. More severe reactions can include seizures, paralysis, psychosis and stroke

Cardiac: palpitations, arrhythmias, pain or pressure in the chest, low or high blood pressure, slow or fast heart rate, shortness of breath

Respiratory: sinusitis, bronchitis, pneumonia, asthma

Dermatological: skin rash, itching, burning, facial flushing

Ophthalmologic: pain or burning in the eyes, pressure in/behind the eyes, deteriorating vision, floaters, cataracts

Others: digestive problems, abdominal pain, enlarged thyroid, testicular/ovarian pain, dryness of lips, tongue, mouth, eyes, great thirst, dehydration, nosebleeds, internal bleeding, altered sugar metabolism, immune abnormalities, redistribution of metals within the body, hair loss, pain in the teeth, deteriorating fillings, impaired sense of smell, ringing in the ears. (Excerpted from No Place To

Hide, Kositsky et al, April 2001) www.es-uk.info/info/recognising.asp

International Recognition of EHS

In Sweden electro hypersensitivity (EHS) is an officially fully recognized functional impairment (i.e. it is not regarded as a disease).

In the U.K, EHS is accepted as a medical disability with sufferers awarded the incapacity benefit.

Health Canada in their 1999 safety Code 6 document states “certain members of the general public may be more susceptible to harm from Radio Frequency and microwave exposure”

In October 2004; the World Health Organization recognised EHS at an international seminar in Prague. They defined EHS as “a phenomenon where individuals experience adverse health effects while using or being in the vicinity of devices emanating electric, magnetic, or electromagnetic fields... whatever its cause, EHS is a real and a sometimes debilitating problem for affected persons. ... Their exposures are generally orders of magnitude under the limits in internationally accepted standards.”

In 2005 the Irish Doctors Environmental Association recognized EHS and has protocols for treatment.

In 2008, the Venice Resolution initiated by the International Commission for Electromagnetic safety and signed by peer reviewed scientists worldwide states in part, “We are compelled to confirm the existence of non-thermal effects of electromagnetic fields on living matter... We recognize the growing public health problem known as electro hypersensitivity.”

In 2011 The Spanish Labour Court of Madrid set a precedent for Spanish people disabled by radio waves by recognising a college lecturer as being permanently disabled by pulsed microwaves from mobile phones and who consequently suffers from chronic fatigue and electro sensitivity.

A full list of the International and German Resolutions appealing for safer emf standards are available at: <http://www.iemfa.org/index.php/all>

At the 2015 WHO international classification of Diseases (ICD) update both Electro Hypersensitivity and Multiple Chemical Sensitivity have been submitted for inclusion as diseases.

Highly recommended websites:

<http://www.iemfa.org/index.php/all>
www.es-uk.info

Recommended Reading:

The Procrustean Approach, Setting Exposure Standards for Telecommunications for Frequency Electromagnetic Radiation. A Thesis by Don Maisch PhD, University of Wollongong, 2010
Public Health SOS: The Shadow side of the Wireless Revolution, Camilla Rees and Magda Havas.
<http://media.withtbank.com/fa52fb2ec3.pdf>

Recommended viewing:

Resonance: Beings of Frequency <http://vimeo.com/54189727>

Anne Gasteringer is a freelance writer living in Christchurch with a particular interest in health and environmental issues. This article was originally written by Anne for The New Zealand Journal of Natural Medicine, Issue 8: February – May 2013.

[1] <http://stopsmartmeters.org.uk/wp-content/uploads/2012/04/Biol-Effects-EMFs-2012-NZ1.pdf> Pg5

[2] *ibid* Pg. 6

[3] Public Health SOS: Camilla Rees and Magda Havas

- [4] <http://mieuxprevenir.blogspot.co.nz/2012/06/electrosensitivity-es-ehs.html>
- [5] http://www.robindestoits.org/Wifi-EMFs-Electrosensitivity-ES-EHS-physiologically-explained-at-last-15-03-2012_a1661.html
- [6] Attitudes to the health danger of non-thermal EMFs. Michael Bevington. Pg. 40
- [7] Public Health SOS: Camilla Rees and Magda Havas
- [8] www.goodhelathinfo.net/radiation/radio_wave_packet.pdf
- [9] www.womenscollegehospital.ca/programs/program76.html
- [10] <http://www.csn-deutschland.de/blog/en/hamburg-hospital-offers-rooms-for-patients-with-mcs-and-environmental-illness/>
- [11] <http://www.electrosmogprevention.org/smart-meter-resources-links/ada-accommodations-info/recognition-of-the-electromagnetic-sensitivity-as-a-disability-under-the-ada/>

Copyright © 2013. All Rights Reserved. Powered by JPIT

Powered by WordPress and WordPress Theme created with Artisteer by Jose Perez.